

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): ~~Apparatus~~ An apparatus for measuring hemodynamic parameters, ~~especially for Augmentation Index (Aix) and/or Ejection Duration (ED),~~ by non-invasive, cuff based occlusive, blood pressure measurement, which apparatus comprises occlusive, oscillometric automatic blood pressure meter and units, determining the values of hemodynamic parameters, comprising

an oscillation wave separating and storing signal detector ~~(1)~~, the sampling rate thereof is at least 200/heart cycle; and has a storage unit ~~(5)~~ resolution thereof is ~~organised~~ organized at least 9 bit,

a ~~preferably~~ digital~~(7)~~ anti-filter ~~(8)~~ to compensate the distortions rising at the sampling, separating and ~~digitising~~ digitizing the oscillation wave,

an amplitude arithmetic ~~(6)~~ unit establishing ~~the~~ an Augmentation Index (Aix); and

a ~~synthetic organ (9)~~ synthesizing unit establishing ~~the~~ an Ejection Duration (ED).

Claim 2 (currently amended): ~~Apparatus~~ The apparatus according to claim 1, wherein the sampling rate of the signal detector ~~(1)~~ is 180-220/second.

Claim 3 (currently amended): ~~Apparatus~~ The apparatus according to claim 1, wherein the storage unit ~~(5)~~ storing the signals, generated by the oscillation wave, is ~~organised~~ organized 10-12 bit.

Claim 4 (currently amended): ~~Apparatus~~ The apparatus according to claim 1 ~~wherein it is equipped with~~ further comprising a time-arithmetic ~~(7)~~ unit establishing ~~the~~ a Pulse Wave Velocity (PWV), ~~and/or or~~ or integrator unit ~~(3)~~ establishing ~~the~~ a Systole Area Index (SAI) and Diastole Area Index (DAI).

Claim 5 (currently amended): ~~Apparatus~~ The apparatus according to claim 1, wherein amplitude arithmetic ~~(6)~~, ~~synthetic organ (9)~~ synthesizing unit, ~~preferably the~~ a time-arithmetic ~~(7)~~ unit, ~~and/or or an~~ or an integrator unit ~~(3)~~ are joined to a common program controller ~~(26)~~, and compiled to an ~~analyser (2)~~ analyzer.

Claim 6 (currently amended): ~~Apparatus~~ The apparatus according to claim 1, ~~wherein it is combined with further~~ comprising a portable, 24h ambulatory blood pressure monitor.

Claim 7 (currently amended): ~~Apparatus~~ The apparatus according to claim 1, ~~wherein it is incorporated in further~~ comprising a telemedical home care system.

Claim 8 (currently amended): ~~Apparatus~~ The apparatus according to claim 1, ~~wherein it is combined with further~~ comprising a 24h blood pressure monitor, which is controlled by a ~~build-in~~ built-in ECG.

Claim 9 (canceled).

Claim 10 (currently amended): ~~Method~~ The method according to claim 9 12, wherein the sampling rate is taken at least 180 samples per second, ~~preferably 200 samples per heart cycle,~~ and ~~the digitised~~ digitized signals ~~flow~~ are stored at least in 9 bit resolution.

Claim 11 (currently amended): ~~Method~~ The method according to claim 9 12, wherein the cuff ~~(11)~~ is set to +35 mmHG ~~supra-~~ systolic pressure range, over the systolic pressure, preferably

~~+35 mmHg pressure,~~ from ~~the~~ a time shift of the main wave and the first reflex, respectively of ~~the~~ a measured sternal notch and pubic bone distance of ~~the~~ a patient, are calculated the Pulse Wave Velocity (PMV) value, ~~and/or~~ or the cuff ~~(11)~~ is set at or near to ~~the already~~ a previously determined diastolic value or near to this, the received heart cycle curve is divided ~~to~~ into two parts with the ED end-point, ~~and thus are constituted the~~ to constitute Systole Area Index (SAI) and Diastole Area Index (DAI) values.

Claim 12 (new): A method for non-invasive measurement of hemodynamic characteristics comprising the steps of:

- (a) performing a standard stepwise blood pressure measurement using an occlusive, pressure-sensor cuff placed on the brachial artery;
- (b) storing systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR) values;
- (c) subsequently setting the cuff to supra-systolic pressure range over the systolic pressure;
- (d) performing a pressure oscillometric pulse wave detection at supra-systolic pressure range, receiving oscillation curve and simultaneously by an "anti-filter" process compensating for signal distortions appearing at sampling;
- (e) calculating an Augmentation Index (Aix) on the basis of the wave amplitudes from the oscillation curves so received; and

(f) calculating the Ejection Duration (ED) value on the oscillating curve determining the minimum point after the first reflex wave.